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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,722	02/04/2004	Fritz Leber	ZAHFRI P592US	4959
20210	7590	04/04/2005	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			BONCK, RODNEY H	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,722

Applicant(s)

LEBER, FRITZ

Examiner

Rodney H. Bonck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/04/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/771,722, filed February 4, 2004. The preliminary amendment filed February 4, 2004 has been entered. Accordingly, claims 1-16 have been canceled. The following treats the merits of new claims 17-32.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the grooves, recited in claim 22, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

Receipt is acknowledged of the Information Disclosure Statement filed February 4, 2004. The cited documents have been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term in parentheses in line 3 of claim 17 is indefinite since it is unclear whether the term is intended as an element of the claim. Reference to "an input (6) of an engine" is indefinite. The engine is the source of power and does not have an input. It appears that the clutch (PK) connects the pump to the

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output of the engine or to the input from the engine, but not to an input of the engine.

Claim 18 includes this same terminology. In claim 20, "the pressure" lacks a clear antecedent. Also, there is no proper antecedent for "the converter pressure". In claim 21, the intended meaning of "is flowed through by converter oil" is not clear. In claim 26, the expression "behind a piston" is unclear. No front and back of a piston have been defined. There is no antecedent of "said piston", line 2 of claim 27. The expression, "behind said piston" (line 4 of claim 27) is also unclear for the same reason as set forth concerning claim 26. In claim 28, "the control valve" lacks a proper antecedent. In claim 32, the intended meaning of "so that a converter can be subsequently inserted" is unclear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-19, 23, 25, 26, 29, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill(GB 870,863). Hill discloses a hydrodynamic converter comprising a pump 11, a turbine 12, and a stator 13. The pump is detachably connected to the engine via a primary clutch 31 in the transmission. The clutch connects the input from the engine to pump shell 11A. The clutch 31 is engaged by spring force and released by fluid pressure. Reduced pressure behind piston 43 would

result in clutch engagement from the force of the spring. The same oil is apparently used in Hill for the converter and for clutch actuation. Inwardly directed spline teeth on the outer border of the clutch can be used for speed measurement.

Claims 17-19, 29, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Lysholm et al.('684). The Lysholm et al. device discloses (Fig. 2) a hydrodynamic converter comprising a pump 110, turbine 120, and a stator 124. The pump is detachably connected to the engine via a clutch 100 in the transmission. The clutch connects the engine input on shaft 92 to the pump hub 106 via shell 108. Internal spline teeth on the outer border of the clutch can be used for speed measurement. The Lysholm et al. device also includes a lock-up clutch 98.

Claims 17, 18, 29, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Briski('262). Briski discloses a hydrodynamic converter comprising a pump 57, a turbine 58, and a stator 59. The pump is detachably connected to the engine via clutch 17 which can be considered to be in the transmission insofar as defined. The clutch connects the pump hub 62 to the engine via converter shell 44,46,48. The toothing on the outer border of the clutch can be used for speed measurement.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lysholm et al.('684) in view of Allen et al.('417). In Lysholm et al. the converter (Fig. 2) is clearly sealed from the remainder of the transmission. The clutch is cooled and lubricated by oil from line 174. The Allen et al. device discloses a hydrodynamic converter wherein a separate system provides for the converter and for cooling than used for clutch actuation (see Fig. 4). It would have been obvious to similarly use different fluids in the Lysholm et al. device, the motivation being to permit the use of the optimum fluid for each use.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lysholm et al.('684) in view of Allen et al.('417) as applied to claims 20 and 21 above, and further in view of Merritt et al.('253). It is unclear in Lysholm et al. whether the clutch has openings and grooved friction linings for conveying the cooling fluid through the clutch. Such an arrangement is well known, however, and is shown by Merritt et al. It would have been obvious to provide in Lysholm et al. apertures for cooling fluid and to provide

grooved friction linings, as taught by Merritt et al., the motivation being to enhance cooling of the clutch.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lysholm et al.('684) in view of Allen et al.('417) as applied to claims 20 and 21 above, and further in view of Fujioka('242). It is unclear whether the Lysholm et al. device has any pressure sensors. Fujioka discloses that it has been known to use pressure sensors to control pressure in a torque converter and associated clutches. It would have been obvious to carry this teaching to the Lysholm et al. device, providing pressure sensors, the motivation being to accurately control the pressure of the converter and the clutches.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill(GB 870,863) in view of Moorman et al.(US 2003/0111314 A1). The clutch of Hill does not include a baffle plate to form a centrifugal compensation chamber. The Moorman et al. device discloses a clutch wherein a baffle plate 48 is provided for rotation-pressure compensation. It would have been obvious to carry this teaching to the Hill device, the motivation being to eliminate the effects of centrifugal force on the fluid.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill(GB 870,863) in view of Holbrook et al.(620). This Hill device lacks the speed sensor and pressure sensor called for in this claim. The Holbrook et al. device teaches controlling a

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clutch with the use of pressure sensors and speed sensors (see column 11, lines 29-54 and column 27, lines 36-50). It would have been obvious to incorporate such sensors in the Hill device, the motivation being to provide more accurate control of clutch engagement.

Allowable Subject Matter

Claim 27 would appear to be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smirl et al.('983) is cited for its showing of clutch actuation through differential pressure control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (703)-308-2904. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703)-308-0830. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
March 29, 2005